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Carving up U.S. roast beef at a recent FAS food exhibit in London.

U.S. Farmer Cooperatives Are Increasingly Active In International Trade

In 1976—the last year for which total data are available—U.S. farmer cooperatives made $3.3 billion in direct and indirect sales to foreign buyers. For some U.S. farm exports, the cooperatives exported a surprisingly large percentage of total U.S. exports in those commodities. Speaking to the International Cooperative Trade Conference in New York City, in mid-November, Dr. Randall E. Torgerson, Deputy Administrator for Cooperatives, Economics, Statistics, and Cooperatives Service, USDA, called it "vital that more cooperatives become involved in the international market." Excerpts from his speech follow.

Farmer cooperatives in the United States play an important role in exporting U.S. agricultural commodities. They are helping to serve the needs of consumers in many parts of the world, as well as to maintain domestic farm incomes and to pay for larger industrial imports, especially costly petroleum products.

Cooperatives in this country are showing an increasing interest in international trade. In some cases, cooperatives are "old hands" at trading, but in other situations, it is something new. Many organizations have not been oriented to the market possibilities and purchasing needs of foreign customers, including cooperatives. However, it is becoming vital that more cooperatives become involved in the international market. We are going through a learning process.

The possibilities of cooperative-to-cooperative trade offer many new challenges and opportunities. A significant part of this is the cooperatives' ability to provide assurance of quality and flow of products to markets. In the process, new institutions to facilitate trade will need to be created, some hopefully with joint cooperative ownership. U.S. cooperatives are becoming increasingly interested in seriously exploring and engaging in international marketing activities in processed foods, fibers, and bulk agricultural commodities.

In 1976, U.S. cooperatives' direct sales to foreign buyers were valued at somewhat over $2 billion.

The top four commodities exported, in terms of value

Facts About Some U.S. Farmer Cooperatives

In fiscal 1976, there were 7,535 U.S. cooperatives serving farmers' marketing, purchasing, and related service needs. Of this number, 4,840 engaged in marketing activity on behalf of members and 5,538 furnished farm supplies—indicating that many local cooperatives perform both marketing and purchasing roles. These cooperatives had a total business volume of $40 billion in 1975/76.

Memberships stood at 5.9 million. Memberships exceed farm numbers because some farmers belong to two or more cooperatives. Memberships per association averaged 784.

As in most countries of the world, U.S. cooperatives are found at the local, regional, and national levels. Development of national level cooperatives is a relatively recent phenomenon with the creation of organizations such as CF Industries in fertilizer and Farmers Export in grain. On the input side, Universal Cooperatives has operated for many years. These are frequently referred to as interregional cooperatives since membership in them frequently comprises regional associations.

More development at the national level is expected in the future. An important factor is that many U.S. organizations are affiliated in a "system" that begins with the farmer's member-

at U.S. loading ports, were the same for cooperatives as for all U.S. agricultural exports. Nationally, they were feedgrains (87 percent was corn), wheat, soybeans, and cotton. The four accounted for 65 percent of total U.S. exports and 68 percent of cooperative exports.

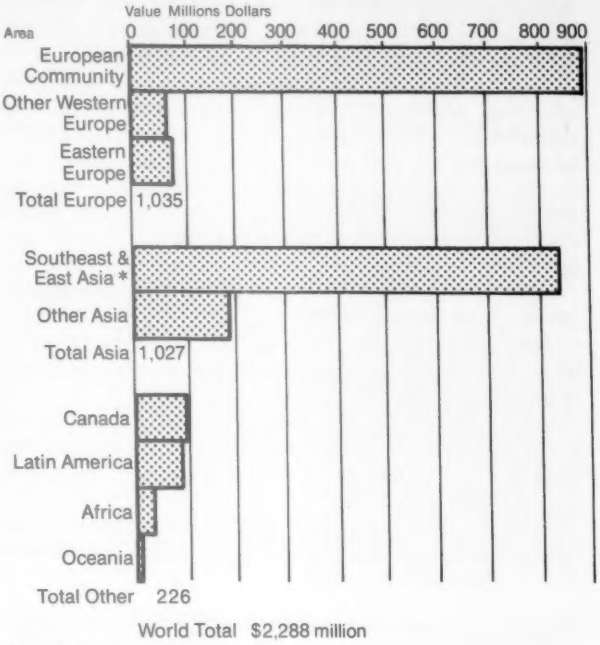
Of these four commodities, cooperatives' share of total exports ranged from 8.2 percent for feedgrains to 22.1 percent for cotton.

For some commodities, cooperatives' share of total exports was much higher. It was 69.9 percent for fresh citrus, 40.1 percent for nuts and preparations (excluding peanuts), and 28.4 percent for processed fruit.

These percentages indicate cooperatives are relatively strong in exports of branded, packaged commodities, and less important in exports of commodities sold in bulk and in large quantities. However, this is not always the case. For example, about $319 million of processed vegetables were exported in 1976 but less than 1 percent were exported directly by cooperatives.

In addition to the $2 billion direct sales of cooperatives, direct-exporting cooperatives moved an additional $1.3 billion of indirect exports in 1976. Grain cooperatives exported directly only slightly more than half of their export-bound volume. Direct exports of oilseeds, oilnuts, and products accounted for 58 percent of export-bound volume of those commodities. For animals and animal products, the proportion sold direct was 69 percent; feed and fodders, 71 percent; vegetables and preparations, 81

Cooperatives' Agricultural Exports to Major World Market Areas, 1976



*Mostly Japan.

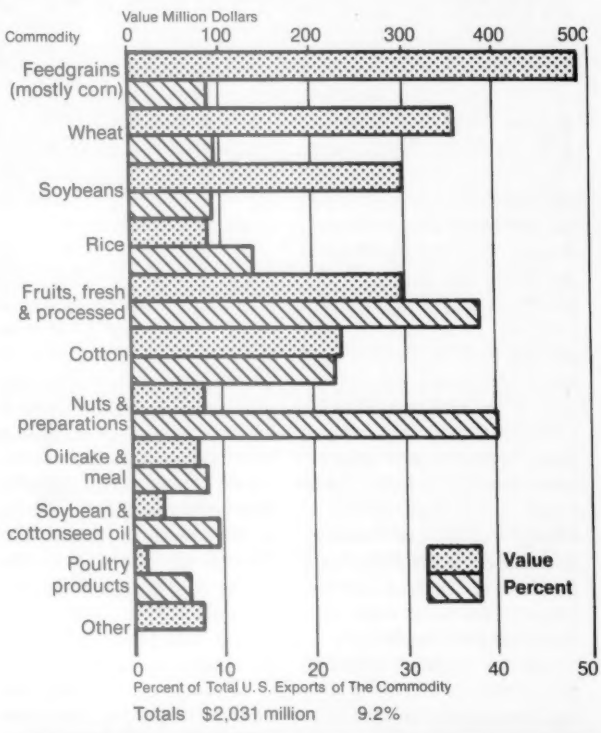
ship in and patronage of a local cooperative—particularly in farm supplies and grain marketing. This local has membership in a regional cooperative, which may or may not have membership in an interregional or "national" organization.

The vast majority are rather small business organizations. A recent financial study indicated that 13 percent of U.S. cooperatives have annual sales under $1 million, 40 percent under $5 million, and 60 percent under $10 million. Viewed from another perspective, 24 percent of U.S. cooperatives have assets under $1 million and 66 percent have assets under $5 million. This suggests that U.S. organizations are built from the ground up. In contrast, the largest single cooperative, a regional, has sales of $3 billion and assets of $1.5 billion. It has 2,200 local cooperatives as members. The largest direct membership cooperative has about 33,000 farmer members.

There are only a few production or worker cooperatives in the United States. The typical farmer cooperative instead comprises memberships of farm operators who own and manage their own farm enterprises. Cooperatives are capitalized and used by these farmers to purchase farm supplies and related services and to market their products.

While many U.S. organizations, particularly those in specialty crops, have a long history of involvement in international trade, many are newcomers to this area. Cooperatives are being encouraged to take a more active role in trade. □

U.S. Cooperatives' Farm Exports and Share of Total U.S. Agriculture Exports of the Commodity, 1976



percent; fruits and preparations, 87 percent; cotton, 88 percent; and nuts and preparations, 97.5 percent.

Data from the direct exporting cooperatives document the foothold cooperatives have in international trade. Their indirect exports, and those of hundreds of other cooperatives that export indirectly only, demonstrate the potential for a greater direct export role in the future.

Cooperative sales are made for delivery to about 100 countries. Ninety percent of total shipments by U.S. cooperatives, in dollar values, was about equally divided between Europe and Asia in 1976. The European Community was the largest integrated market, and Japan was the largest individual country buyer. The other 10 percent of the cooperatives' volume went to Canada, Latin America, Oceania, and Africa.

For U.S. cooperatives exporting certain commodities—especially wheat, feedgrains, soybeans, and feed meals—making more sales delivered to foreign ports appears to be a way to provide improved service to cooperatives and other buyers around the world.

Very small proportions of the wheat and soybeans were sold "delivered" by cooperatives to foreign destinations in 1976. None of the feedgrains were sold delivered, that is c.&f. and c.i.f.

There are valid reasons for cooperatives to make more sales on a delivered basis (c.&f. or c.i.f.) if they are to continue to grow and to enhance their competitive position in U.S. export grain trade. Chartering (leasing) of ocean-going vessels is an essential part of delivered sales, but at present it is often difficult for cooperatives to obtain vessels at rates as low as those available to their competitors. Therefore, to make more delivered sales, cooperatives will need chartering expertise.

C.&f. and c.i.f. sales involve assumption of substantial risks by a cooperative shipper and require special expertise on its part. There is no assurance that a particular cargo sold c.&f. or c.i.f. will return as much to the cooperative as a sale not providing for delivery overseas. However, c.&f./c.i.f. sales made in a continuing program are likely to benefit the cooperative in three major ways:

- Gain a net margin on the chartering of vessels during the year;
- More easily establish a reputation overseas for the dependable quality of its product and reliability of its performance, and thus enhance the value of its product in the minds of overseas buyers;
- Obtain greater flexibility in operations than is possible without such sales.

Of major significance in future expansion of cooperatives' export sales is their uniformly high quality products, dependability of service to buyers, as well as competitive prices. □

USDA Proposes New Rules for Title II, P.L. 480

New regulations for procurement and shipment of U.S. processed agricultural commodities for donation under Title II, Public Law 480, have been proposed by the U.S. Department of Agriculture (USDA). Although lowest landed cost would continue to be the prime consideration in awarding contracts under the new regulations, other factors would also be considered—and in some cases, they would be overriding. USDA is seeking comments from interested parties on the proposed regulations that were announced on November 1.

Lowest landed cost is calculated by adding the free-alongside-ship price of the commodity, as submitted by the vendor in the bid, to the cost of ocean transportation for delivery to the foreign port of destination.

A slightly higher price than lowest landed cost might be justified if results were significantly shorter ocean transit time and reduced risk and on-time delivery. A different coastal range, next highest price than the lowest estimates, might be preferable if delivery delay from the range in the lowest estimates was threatened due to labor disputes, port congestion, railcar shortages, or lack of timely ocean service. If shortages or unavailability of railcars were to indicate a delay in getting the commodity free alongside ship, other forms of transportation, such as trucks, would be considered.

Other factors that also will be considered are: Definite patterns of unsatisfactory steamship company and/or stevedore performance bearing on loss and/or damage of commodities at destination ports; performance of the company in meeting the delivery schedule requested by the consignee; and timely delivery of commodities.

Before final selection of the coastal range or U.S. port, the contracting officer will determine adequacy of the port to receive, accumulate, handle, store, and protect the cargo. Added factors will include—but not be limited to—adequacy of buildings, proper ventilation, freedom from insects and rodents, cleanliness and overall good housekeeping, and warehousing practices.

When any of these factors become relevant, more time may be required before contract awards are made. Consequently, USDA proposes that added time—up to 72 hours—be allowed after bids are opened to analyze them and notify successful bidders. However, notification of successful bids will be made as quickly as possible and the full 72-hour period may not always be necessary.

Comments from interested parties are invited and responses are especially requested on the following issues:

- Timely delivery of commodities to ultimate destination, the issues of alternative coastal ranges, methods of inland transportation, and ocean service;
- Railcar availability, car access to one or more coastal ranges for more effective utilization of energy and equipment;
- Steamship and stevedore performance and commodity loss and damage, based on historical data; and
- Facilities and conditions at U.S. ports concerning warehousing methods,

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Food America '78 Projects $6 Million In U.K. Food Sales

As a market for U.S. consumer-ready food items, the United Kingdom's imports have mushroomed from $10 million 7 years ago to over $200 million in 1978.

Among reasons for this marketing success story are enterprising market development activities such as Food America '78, one of the largest exhibits of U.S. frozen, processed, and fresh agricultural products ever held in the United Kingdom.

This trade-only show held October 9-10 at London's Grosvenor House Hotel was sponsored by the Foreign Agricultural Service and resulted in roughly $250,000 in off-floor sales in 2 days' time for the 52 U.S. exhibitors participating. Projected 12-month sales are expected to reach roughly $6 million.

Over 1,100 people attended the exhibit from all areas of the food industry in England—wholesalers, retailers, caterers, food store and department store representatives, and institutional buyers.

Some 75 U.S. food corporations, displaying nearly 500 products were represented at Food America '78.

Among the items buyers were invited to sample were meat and meat products, nuts, poultry and poultry products, sauces, vegetables (fresh, canned, frozen, and processed), dietary foods, food and beverage bases, seafood, cake mixes, confectionery items, spices, and egg products.

Also popular were potatoes and potato mixes, popcorn, sweet potatoes, textured vegetable protein, soya products, cranberries, wines, drink mixes, pudding, pie fillings, health food snack items, and chocolate cheese.

Fresh produce was also popular at the show; attractive displays of fresh fruits and vegetables, including sweet potatoes, cranberries, lettuce, strawberries, and apples, tempted the appetites and business interests of many of the buyers.

More than 20 of the U.S. exhibitors were new to the British market and were looking for an agent in the United Kingdom to represent their products.

Britt Cobb, European Director of Agriculture for the State of North Carolina, was at Food America '78, representing Farmpak Inc. He was introducing fresh sweet potatoes to the U.K. market. Said Mr. Cobb: "Reaction from the buyers has been outstanding. The response to our yams has been overwhelming and we expect to do a lot of business here. Our first shipment is to arrive in November."

Other exhibitors, such as Harry Geedey, representing Empire Kosher Poultry, Mifflintown, Pa., which distributes raw and cooked kosher poultry products and frozen pizza, has been in exhibits in the United Kingdom for over 5 years. Geedey said he was at Food America '78 primarily to increase his market share.

Said Peter Maxwell-Lyte, sales manager for Harvey Prince and Co., importers of Almaden wines: "Never before has there been so much interest shown in our California wines and we can see a great future for them in Great Britain." □

By Lynn Krawczyk, staff writer, *Foreign Agriculture*.

Clockwise from upper left: Two representatives of Hax Limited display dip containing dehydrated onion and garlic. Peter Walsh shows fresh produce of Griffin and Brand (European) Ltd. U.S. Agricultural Attaché William Rodman (left) and Deputy Chief of Mission Edward J. Streator, Jr. pose at a seafood display.

East European Grain Output at '77 Level

East European grain production in 1978 apparently was not as low as late summer conditions had indicated, and is now estimated to have reached about 9.35 million metric tons—the same quantity produced in 1977.

Total East European grain imports during 1978/79 should approximate the 13 million tons imported during the previous year.

Increased demand for imported corn and other coarse grains in Bulgaria, Romania, and Yugoslavia should largely offset some reduction in import needs in Hungary, the German Democratic Republic, Czechoslovakia, and Poland, resulting from their improved 1978 crops. □

Growth of Cassava Use As Feedgrain Substitute Not Without Problems

By Dean Richards

Long a traditional staple food in many developing countries, cassava is now increasingly used as a feedgrain substitute in several advanced countries. As such, cassava has great potential—and many problems. Although it is low in cost, it is low in protein and hard to ship. The supply for export is limited: Thailand accounts for most of the world's exports, which go mainly to the EC, an important market for U.S. foodstuffs.

Cassava, traditionally a staple food crop in the developing countries where it is grown, is fast gaining ground as a feedgrain substitute in developed countries with sizable livestock operations.

This use, however, is not without problems. Cassava is low in protein and is a soil-exhausting crop. In addition, shipping, handling, and environmental problems have been encountered because of the lack of effective binding agents to keep cassava pellets from disintegrating during shipment.

In the major producing countries, cassava is known variously as tapioca, manioc, mandioca, and yucca—and has almost as many uses. In Brazil, for instance, it is used in the production of alcohol as a petroleum substitute.

Despite the new-found uses for cassava, just 4 percent of the world's production enters export channels. Thailand, producer of only about 5 percent of the world's output, dominates the trade—most of which goes to the European Community (EC), an important market for U.S. feedgrains. (See *Foreign Agriculture*, Sept. 25, 1978.)

Believed to have originated in tropical Brazil, cassava is a shrubby root crop with significant photosynthetic potential and has good tolerance of drought and poor soils and strong resistance to weeds and pests. It is an all-season subsistence crop in the major producing countries and is valued for its high starch content.

Because the cassava root is deficient in protein, cassava feed rations are usually mixed with soybean meal. However, the leaves and stems of the cassava plant have a protein content of about 17-20 percent—equivalent to that of alfalfa. Recent studies have shown that cassava leaves may have considerable potential as an alternative source of protein in animal diets.

The author is an agricultural economist, Grain and Feed Division, Commodity Programs, FAS.

Annual world production of cassava root is estimated at just over 100 million metric tons, with the combined output of Brazil, Indonesia, and Nigeria accounting for about half of the world's total. Brazil, whose output was 26.7 million tons in 1977/78, has long-term goals of using alcohol extracted from cassava for domestic fuel needs, with the residues from the extraction process going into local livestock feed. The world's first cassava-alcohol factory began commercial operation in Brazil in January 1978. Brazilian demand for cassava as a staple food source has been declining in recent years, thus freezing cassava supplies for alcohol production and other uses.

More than 90 percent of the world's cassava production continues to be consumed as a staple food in the tropical countries where it is grown.

Of the roughly 100 million tons produced last year, only about 4 million tons were traded. Thailand is by far the world's largest exporter, accounting for more than 95 percent of world exports. Indonesia, with exports of about 120,000 tons in 1977, is the second largest exporter.

Both Thailand and Indonesia have gained prominence in the market only since the late 1960's, with the advent of pelletization. Earlier, when cassava was exported primarily in the form of chips and meal, Angola, Tanzania, and Malawi exported some cassava to Western Europe. But today, only Thailand and Indonesia have the necessary pelletization plants. Most Thai exports are shipped in consignments of up to 100,000 tons while Indonesia's shipments are mainly in consignments of about 12,000 tons.

Since Thailand in recent years has been exporting an increasingly large share of its annual cassava production, importers have come to correlate the size of the Thai harvest with short-term market supplies. Initially, cassava was grown on virgin land in Thailand's central region. But, because cassava is a soil-exhausting crop, production has shifted primarily to the northeastern region of the country, where it has replaced kenaf as the area's principal cash crop.

Although Thai cassava-production increases have averaged about 5 percent for the past several years—with 1978/79 production estimated at 5.2 million tons, soil exhaustion could lead to an eventual decline in production. This possibility, in addition to mounting pressure from the EC, has led the Thai Government to urge cassava farmers to switch to vegetables, soybeans, or pineapples. In the northeast, however, where most of the cassava is grown and where farmers are faced with limited alternatives, a substantial drop in cassava production is not likely to occur in the immediate future.

Thailand now exports nearly 85 percent of its annual cassava crop. Of the 3.9 million tons exported in 1977, 3.7 million tons (or 95 percent) went to the EC. The rest was shipped primarily to the Asian countries of Japan, Hong Kong, Malaysia, and Singapore for livestock consumption.

Just as Thailand is the dominant cassava exporter, the EC is by far the world's largest importer. EC cassava imports are expected to exceed 4.5 million tons this year, triple the 1972 import level.

In recent years, the Netherlands has replaced West

Clockwise from far left: Plantation of young cassava plants in Thailand; cassava roots being washed before passing into settling tanks; preparation for making cassava pellets, in which form cassava is primarily exported.

Germany as the largest buyer within the EC. Dutch cassava imports have increased nearly fivefold from the 1972 level of 426,000 tons. Net Dutch imports of 1.8 million tons in 1977 accounted for nearly 50 percent of total EC cassava imports. Dutch feedgrain self-sufficiency is the lowest level of all EC countries, while Dutch consumption of compound feeds per livestock unit is the highest in the EC.

The most important Dutch feed sectors—hog and cattle—commonly use mixtures with 15 to 35 percent cassava content, while the poultry feed sector puts cassava utilization at about 10 percent. (Cassava utilization is not higher in the poultry feeds because cassava, when improperly dried, may form bacteria particularly harmful to poultry. Recent studies, however, have concluded that layers can consume rations of up to 50 percent cassava without any perceptible difference in performance or in quality of eggs.)

Cassava demand in the Netherlands hinges on either of two factors—an increased share of cassava in total ingredients of compound feeds or future markets for the largely export-dependent Dutch livestock sector. In part, Dutch cassava usage has been constrained by environmental factors. No satisfactory binding agents for cassava pellets have been developed, so pellets frequently disintegrate during shipments, creating significant dust and handling problems.

A windy climate makes the Netherlands with its flat terrain particularly vulnerable to the hazards of cassava dust. Some compound feed factories, located in or near population centers, frequently have been unable to use cassava in sizable quantities because of handling difficulties. If successful, Thai efforts to improve pellet cohesion could result in a significant increase in Dutch cassava consumption.

Meanwhile, Dutch compounders are expected to boost cassava rations, which could bring net Dutch cassava imports this year to a record 2 million tons, up 200,000 tons from those of 1977.

West Germany is the second largest cassava importer in the EC, taking nearly 1 million tons last year. Most of these imports are consumed in the northern areas of the country, close to ports of entry. Cassava has been replacing barley in hog and poultry rations, but at 30 percent of hog rations and 20 percent of poultry rations, cassava use is expected soon to level off.

Belgian cassava imports have risen steadily in recent years, except in 1973 when prices for soybean meal were high. The hog sector accounts for about 70 percent of Belgian cassava consumption — with hog rations of up to 15 percent cassava content. Of the remaining cassava consumption, about 15 percent is used in fattening rations for cattle, about 12 percent in milk rations, and 5 per-

cent in granulated poultry feed. As with the Netherlands, expansion of Belgian cassava imports is more likely to depend on increased cassava content in mixed feeds rather than on any significant expansion in livestock production. Belgium's mixed-feed production has declined slightly from the record 1976 level of 5.1 million tons.

In any event, Belgium's proximity to France results —in EC terms—in relatively lower grain prices for compounders, so cereal substitution does not take place to the degree that it does in the Netherlands.

An important grain producer, France has imported cassava in significant quantities only recently. In addition to high transportation costs and considerable handling problems associated with transshipments, large domestic grain surpluses have made cassava imports less competitive in France than elsewhere in the EC. Most French cassava imports are utilized in coastal Brittany in mixed rations for hogs.

According to the EC's semi-official press agency "Europe," French Agricultural Minister Pierre Mehaignerie has requested protective measures against imports of low-price feedgrain substitutes, particularly cassava. France is especially concerned that cassava imports are cutting into established European markets for French corn and other feedgrains, and claims that movement from grain-surplus to grain-deficit areas is being disrupted.

The French have recommended a modification of the tariff classification for cassava pellets, which now enter the Community under a levy equal to 18 percent of the barley levy or 6 percent of the value of the pellets, whichever is less.

France also has proposed that the EC negotiate a voluntary restraint agreement with Thailand. A major grain elevator in Rotterdam, Grann Elevator Mij, has warned that restrictions on cassava imports would result in considerably higher prices for animal feeds and products.

In other EC countries—the United Kingdom, Italy, and Denmark—trial shipments of cassava have been hindered by unloading problems in ports not adapted for cassava handling and, until quite recently, an unclear price advantage. Lacking a high level of grain self-sufficiency but boasting a growing compound feed industry, Italy may become a good market for cassava imports. This year, Italy for the first time began to import cassava products by contracting with Thailand for 400,000 tons.

Since U.K. compounders are mostly situated inland, the combination of transportation costs and the lowest grain prices in the EC has traditionally limited the economic advantage for feedgrain substitution. However, the recent increase in intervention prices for feed wheat and barley that accompanied the final phase of U.K. entry into the EC has begun to make cassava prices more attractive to compounders. Further "green pound" devaluations are likely to trigger expanded cassava usage, perhaps to the 10-20 percent content levels common in German and Belgian compounds.

Thus far, Danish cassava imports have been minimal. Denmark is nearly self-sufficient in grains and, like the United Kingdom, is still in the final phase of transition into the EC, so that domestic grain prices are still lower than other EC grain prices. □

Indian Plan Targets Sharp Crop Gains

Hoping to sustain and accelerate agricultural gains of the recent past, India is calling for a 4-percent yearly growth in agricultural output during the next 5 years. This ambitious goal, outlined in the country's new plan for 1978/79 through 1982/83, hinges largely on increased double cropping and greater reliance on irrigation and other inputs.

Even if India reaches its new targets, however, it will have to continue importing a number of agricultural products—including cotton, vegetable oils, and jute. Still-rapid population growth of about 2 percent a year will complicate efforts to improve the national diet. And rising standards of living will work to expand and diversify demand for food products.

As always, a crucial unknown is weather. Periodic failure of the summer monsoon is a fact of life in India, and short crops at times have forced India to import large quantities of foodgrains.

As late as July-June 1976/77, for instance, India was importing large quantities of wheat, and a year earlier it ranked as the largest cash market for U.S. wheat.

But two bumper crops during the past 3 years—including a record 125.6 million tons in 1977/78—have since put the country in a strong supply position.

The country has moved to repay in kind some 1.5 million tons of a 2-million-ton USSR wheat loan of 1973. In addition, it has loaned 75,000 tons of flour and 300,000 tons of wheat to Vietnam and 50,000 tons of wheat to Afghanistan.

The country also had a Government-held stock cushion of about 15.5 million tons of grain at the end of October 1978.

For 1978/79, grain production is expected to remain near the record 1977/78 level, despite flooding in parts of northern India during August and September.

Meanwhile, Government plans are focusing on how to bring further gains in agriculture, whose lead role in the Indian economy is undisputed. For example:

- Agriculture is the dominant sector of the economy, providing the livelihood for an estimated 70 percent of the country's 634 million people.
- An estimated 60 percent of personal income goes for food, and many Indians still lack the purchasing power to meet even basic food needs.

In light of this high dependence on agriculture, India is devoting nearly 40 percent of the plan's expenditures to crop production, rural development, irrigation, flood control and power, and village and small-scale industries.

Generally speaking, goals of the new plan are ambitious and optimistic. Total agricultural production is

From Office of U.S. Agricultural Attaché, New Delhi.

to rise 3.98 percent a year. Greatest emphasis is being placed on pulses and commercial crops such as cotton, jute, and mesta. Wheat —showpiece of the Green Revolution and one of the fastest production gainers during the recent past—will receive somewhat less emphasis than in the previous 5-year plan to permit growth in other areas.

Area expansion will be limited to a 6.1-million-hectare increase in multiple-cropped area as increased inputs account for most of the anticipated growth in production. Planned improvements include:

- Irrigating an additional 17 million hectares, which would bring gross irrigated area to 63.4 million hectares but require a much faster rate of growth than in the previous plan;
- Planting high-yielding varieties on 15 million more hectares—5.5 million in rice, 2 million in wheat, and the balance in other grains and pulses;
- Boosting consumption of chemical fertilizer to 7.85 million tons by 1982/83 from 4.34 million in 1977/78, which would require an annual growth rate of 12 percent compared with an average of 9.4 percent during the past 5 years.

Foodgrains—by far the most important commodity group in India—continue to receive emphasis, with output targeted to hit 140.5 million tons by 1982/83, for a yearly increase of about 3 percent. Whereas recent expansion has depended on achievements in the wheat area, future growth targets must of necessity rely on success in such fields as rice, pulses, and coarse grains, where yields are traditionally unstable.

Moreover, the current goal is some 60 percent greater than actual gains during the past plan period and substantially above forecasts by the Office of the U.S. Agricultural Attaché. The latter's forecasts range from 122.5 million tons given poor weather to 134.5 million tons for normal weather and 141.5 million for good weather.

Forecasts for per capita availabilities likewise vary widely. If the plan's goals are achieved, per capita foodgrain production will reach a new record of 202-207 kilograms, compared with 198 kilograms actually achieved in 1977/78. The attaché forecast, on the other hand, ranges from 176 kilograms per capita with poor weather to 203 with good weather.

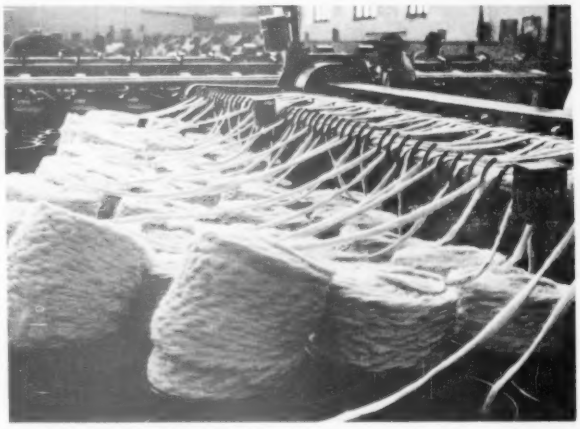
Rice, India's major foodgrain, is targeted to reach 57.4 million tons by 1982/83, compared with the record 52.7 million tons achieved in 1977/78. Rate of growth will have to more than double that of the past plan if this goal is to be achieved. Only a marginal gain in area is planned.

Growth in production of wheat, on the other hand, is seen slowing to 4.28 percent a year from the 5.41 percent achieved between 1967/68 and 1976/77. Despite this reduced emphasis on India's "wonder" crop, output could still hit about 37 million tons by 1982/83, compared with 31.3 million in 1977/78.

Wheat area under irrigation is expected to reach 17 million hectares (or 75 percent of the total) by 1982/83. Some 15 million hectares will be planted to high-yielding varieties.

Production of coarse grains is seen rising at a modest 1 percent yearly rate to reach 30.5 million tons by the plan's end, with area expansion accounting for virtually all the growth.

Pulses—the basic protein source for India's



Top to bottom: Many Indian farmers still plow with bullocks; cotton being processed prior to spinning; and open storage of wheat in Ludhiana District of the State of Punjab.

population—are receiving major emphasis in the plan, and production growth is targeted to jump from only about 0.3 percent a year during the past plan to 3.69 percent. This would boost total production to 15.58 million tons by 1982/83.

Major **oilseeds**—peanuts, rapeseed, mustardseed, sesameseed, flaxseed, and castorseed—also will be stressed as the country moves to avoid serious shortages of edible oils. The goal is a 4.01 percent yearly growth rate—more than three times that achieved in the previous plan—that would boost output to 11.2-11.5 million tons by 1982/83.

During the past 2 years, oilseed production has lagged behind domestic demand, resulting in sharp gains in imports of edible vegetable oils. These imports climbed from 105,000 tons in 1975/76 (October-September) to 770,000 tons in 1976/77 and rose even further in 1977/78. The United States has shared in this trade growth, shipping close to 500,000 tons of soybean oil to India during 1976/77 and 1977/78, which made India the largest single market for U.S. soybean oil.

While goals of the plan are to reduce this dependence on imports, India's Central Organization for Oil Industry and Trade has projected that vegetable oil imports will grow and reach 1.8 million tons by 1987.

As with oilseeds, production of **cotton** has not kept pace with demand, and sharp gains will be necessary if India is to halt the trend toward larger and larger imports. The new plan aims at a 1982/83 production of 8.15-9.25 million bales (170 kg each), recognizing that the lower target is more realistic. But output still must rise some 4.86 percent a year compared with only 1.54 percent achieved in the previous 5-year plan.

Crucially important will be the amount of land brought under irrigation. The plan calls for a 10.4 percent yearly increase in irrigated area to 3.2 million hectares by 1982/83.

Even if these optimistic objectives are realized, 1982/83 production of cotton will fall short of demand by an estimated 1.1 million bales. India, therefore, is expected to remain a major importer of raw cotton in the years ahead. During 1977/78, it imported 290,000 bales of cotton.

A similar rapid growth rate is targeted for **jute and mesta** production, which is to rise 4.83 percent a year to 8.56 million bales (180 kg each) in 1982/83. Rate of increase in the previous plan totaled only 1 percent a year, with a crop of slightly more than 7.1 million bales in 1977/78.

Here again, demand is outpacing production—and will continue to do so even if plan targets are met—and imports in the range of 300,000-600,000 bales are forecast for 1982/83.

Among India's important exports, **sugar** production will expand at about the same rate as in the past 5 years, if goals of the new plan are realized. The hope is to boost sugarcane output by 3.69 percent a year to 188 million tons by 1982/83.

Cane output in 1977/78 came in at a record 181.6 million tons—29 million above the previous high set in 1976/77. However, results of that crop have not been entirely favorable. Burdensome stocks of refined sugar have depressed domestic sugar prices. About 500,000 tons of the planned 1982/83 sugar output is earmarked for export. □

Feedgrain Crops, Trade Head for New Records

By James P. Rudbeck

The 1978/79 season is shaping up as a record breaker for world feedgrain production and trade. Favorable weather in virtually every major producing country has boosted output, which of course means that competition in world markets will be keen. Yet trade also promises to continue its brisk early season pace as importers—including the People's Republic of China—step up buying to meet expanding needs.

World trade in feedgrains in 1978/79 will likely rise for the fourth consecutive year to a record volume, even with world production estimated at an all-time high. Import demand for feedgrains continues to grow in countries where rising requirements outpace domestic production. Increased utilization, however, will not be sufficient to preclude a rise in world stocks. Over half of the increase in global stocks is likely to occur in the United States, but stocks outside the United States are projected to grow to the highest level ever.

Despite the prospective increase in world feedgrain supplies, prices have remained firm and in fact are even above levels of a year earlier. One important factor behind this price strength is recent large purchases of corn by the People's Republic of China (PRC). Some countries may also be taking advantage of the recent decline of the U.S. dollar to increase utilization and/or stocks. Other factors may include farmers' withholding of grain from the market and participation in the U.S. reserve program.

Factors in the United States have a significant bearing on world price movements. Although the United States accounts for about 30 percent of world production and 20 percent of utilization, it currently supplies over 60 percent of world trade, and U.S. stocks have grown to represent about half of the world total.

Record production. The Northern Hemisphere feedgrain harvests are nearly completed, but a degree of uncertainty still surrounds the Southern Hemisphere crops, which account for about one-tenth of the world total. The current estimate for the 1978/79 world feedgrain harvest is 732 million metric tons.

If final world production proves to be around this level, it will be 30 million tons or 4 percent higher than the previous record in 1976 and 38 million tons or 5 percent over last season's outturn. Corn production accounts for about half of the global feedgrain total; barley, about a

The author is an agricultural economist, Grain and Feed Division, Foreign Agricultural Service. This article is based on a speech delivered on November 15 at the National Food and Agricultural Outlook Conference, Washington, D.C.

quarter; grain sorghum, one-tenth; and oats and rye, the balance.

This season is proving to be highly unusual because there are no signs of significant crop shortfalls in any areas of the world. Record or bumper feedgrain crops are possible in the United States, Canada, the USSR, the European Community, the PRC, Thailand, Australia, Brazil, and India, which together account for two-thirds of the world total.

The only notable areas where feedgrain production might not match the levels of a year earlier are Eastern Europe, Argentina, and South Africa. In the latter two Southern Hemisphere countries, yields were unusually high last year, and the projections assume a return to more normal yields this season.

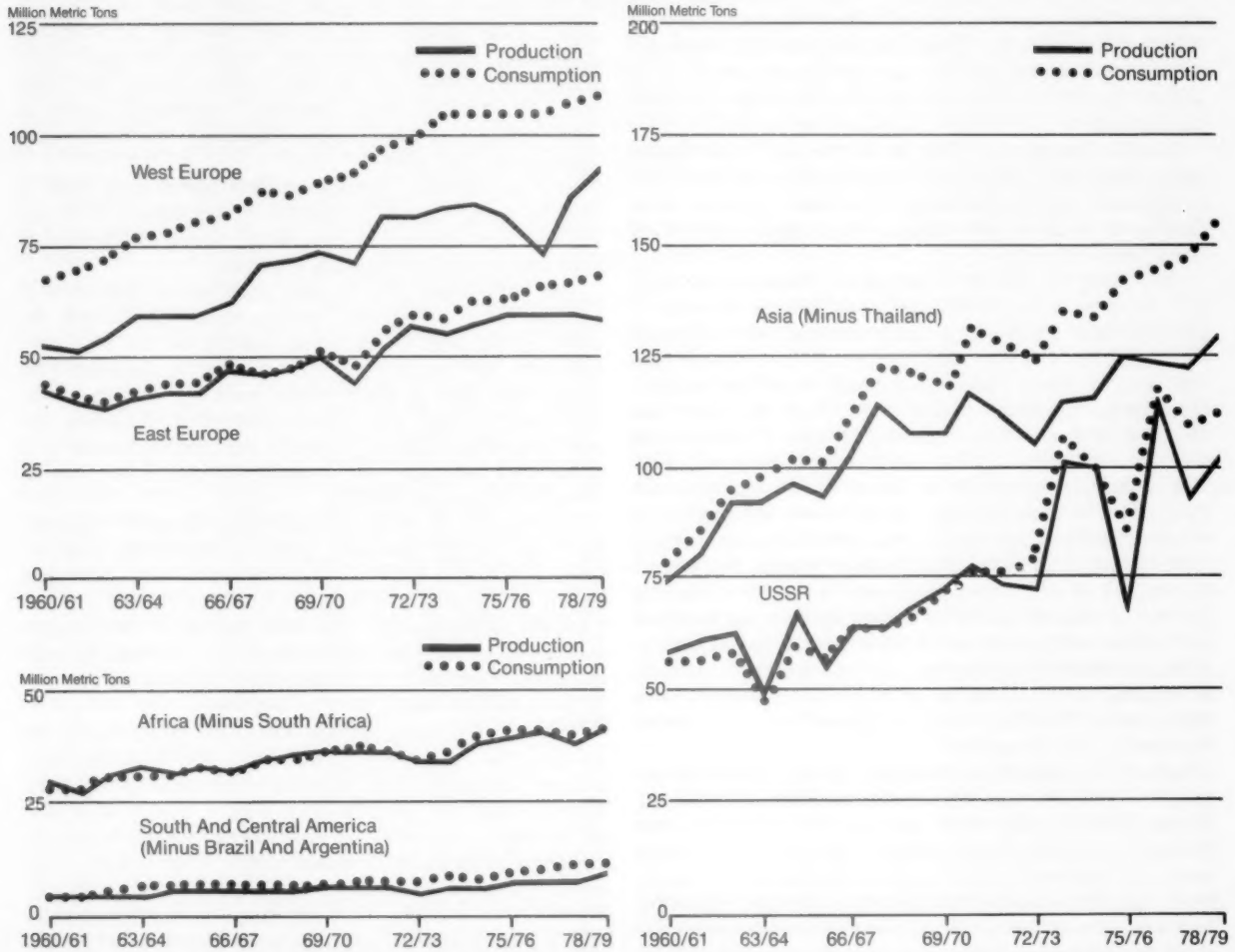
Utilization highest ever. Current estimates indicate that world utilization of feedgrains in 1978/79 will rise by about 20 million tons to a record 709 million tons. The average annual rate of increase over the past 5 years has been around 12 million tons.

Increased livestock numbers in some countries, combined with more intensive feeding in these and other areas, largely account for this rise in world utilization. Some countries may also be taking advantage of the recent decline in the U.S. dollar and the increased spread between the price of wheat and corn to increase the utilization of corn—in some cases, for human consumption as well as for animal feeding. Approximately 60 percent of worldwide corn, barley, grain sorghum, oats, and rye utilization is for livestock feeding, while human consumption—particularly in areas of South America, Asia, Africa, the USSR, Eastern Europe, and the PRC—accounts for around 30 percent. The balance is for industrial uses and seed.

Aside from the United States, increased utilization is expected in the Soviet Union, Eastern Europe, the PRC, and a number of "middle-income countries," such as the Republic of South Korea, Taiwan, Iran, Venezuela, and Mexico.

Growth of feedgrain utilization, however, could possibly

Coarse Grains: Production and Consumption in Major Importing Regions* and the USSR, 1960/61-1978/79



*Countries excluded from those regions are net exporters of coarse grains.

slow in the two major importing markets—the European Community and Japan. In the European Community, where nongrain feedstuffs such as manioc enter feed rations at a price advantage over grains, feedgrain utilization may remain stable. Japan's utilization should grow, but the rate of increase will depend on the Government's decision on the disposal of surplus rice. If some of this rice is offered to feed compounders at subsidized prices, it could slow down the rate of increase in grain usage.

Imports rising. World trade in feedgrains this season is expected to rise to new heights, the fourth consecutive year that trade has continued to increase. In 1975/76, trade was boosted by large Soviet imports; in 1976/77, Western Europe came into the market for unusually large purchases; and in 1977/78, Soviet buying was again a contributing factor to expanded world trade.

In 1978/79, prospects for a further rise in world trade are supported by the emergence of the PRC as a significant buyer of corn and the expectations that the USSR will maintain large imports.

The PRC has already purchased 1.9 million tons of U.S. corn, plus smaller amounts of Argentine and Thai corn. These are the first significant import purchases of corn by that country since 1973/74, and come at a time when overall domestic grain production is estimated to increase over last year's. In light of the extensive use of corn for human consumption in China, one possible factor in these recent corn purchases is the increasing world price spread, which may be encouraging purchases of corn over wheat.

Despite this year's record grain harvest in the Soviet Union, the corn component of that crop—normally relatively small—will be reduced. Since corn appears to be gaining in favor in feed rations, this suggests continued large corn imports.

Underlying the overall expansion in world trade, however, have been continually and steadily larger imports by other areas of the world, such as Japan, Eastern Europe, the Republic of South Korea, Taiwan, Iran, Venezuela, and Mexico. Other countries are also importing increasingly larger quantities of feedgrains, but the latter five countries are currently importing at least 1 million tons per year, and three have crossed the 2-million-ton mark. This underlying strength in world import demand will carry into the current year, as domestic production in these and other areas cannot keep pace with demand.

The European Community, which accounts for around 20 percent of world feedgrain imports, might reduce its volume of imports owing to burdensome local supplies and continued competition from nongrain feedstuffs. In some EC countries, however, corn utilization is already at minimal technical levels in feed rations, and further displacement by either nongrain feedstuffs or local barley may encounter difficulties.

Export competition to intensify. World trade in feedgrains in 1978/79 may rise, but competition will be more intense than during this past year. Based on the harvests completed in the Northern Hemisphere and early season prospects in the Southern Hemisphere, exports from the major foreign exporters—Argentina, Canada, Australia, South Africa, Brazil, and Thailand—might be close to 10 percent higher this year than in 1977/78. In addition, exports of EC feedgrains, which increased about 35 percent this past year, might be sustained at close to the same level.

World Feedgrain Supply and Distribution, 1974/75–1978/79

[In million metric tons]

Items	1974/75	1975/76	1976/77	1977/78 Prelim.	1978/79 Forecast
Supply:					
Beginning stocks	64	58	56	76	82
Production	628	644	702	694	732
Total supply	692	702	758	770	814
Utilization	633	646	682	688	709
Ending stocks	58	56	76	82	105
World trade	64	77	82	83	86

In the Northern Hemisphere, Canada's barley crop was slightly less than last year's, but farmers were already holding record stocks. The Canadian Wheat Board will be under pressure to boost barley exports following a dropoff last year.

The EC barley crop is estimated to be a record for the second consecutive year, and heavily subsidized exports have already begun.

Thailand's production of corn recovered this year and is estimated to be about 60 percent over the previous year's poor harvest. Exports are expected to increase, and sales have already been reported to such nontraditional markets as the PRC, North Korea, and Vietnam. Taiwan and Japan are also negotiating contracts with Thailand, and have been historically the two largest markets for Thai corn.

In the Southern Hemisphere, the barley crop that is now being harvested in Australia is estimated to be the highest ever. Increased exports of barley are expected from that country, particularly to Japan.

The 1978 South African corn crop was a near record, but because of internal transportation limitations on bringing the crop to the ports, exports will be extended well into 1979 even if the next harvest is reduced. The area under corn in South Africa does not change much from year to year, and annual production variations are due to weather. Even if yields for the coming harvest are lower than the past year's, South Africa will be able to increase exports in 1978/79.

The recent Argentine corn and grain sorghum harvests were favored by excellent growing conditions. Exports were high in the months following the harvest, but have begun to decline awaiting the next crops, which are currently being planted. The area planted to both crops may be more or less maintained, and if yields do not equal the records of this past year, exports during the 1978/79 season might decline slightly.

Brazil's corn crop earlier this year was struck by drought and was nearly 25 percent lower than the 1977 outturn. Domestic feed demand has been growing in recent years, and imports of at least 1 million tons will be necessary this year as opposed to exports of about the same magnitude in recent years. High prices as a result of this year's shortfall are expected to encourage producers to increase corn plantings. If weather conditions are good, exports could be resumed in mid-1979.

Stocks rising. Global stocks of feedgrains are projected

Continued on page 16

1979 World Sugar Outlook Calls for Closer Supply, Demand Balance

By Leslie C. Hurt

An expected record world consumption of sugar during 1978/79 will help close the gap between supply and demand and contribute to more stable market conditions in the current September-August sugar season. Stocks at the beginning of the season equaled about one-third of the year's requirements. Little change is expected in the world's trade.

Despite an excess of sugar overhanging the market, a closer balance between supply and demand should improve the world sugar situation in 1979 as global production is expected to slip to just under the year-earlier record while world consumption is projected to reach a new high. In addition, a firmer market is likely to get a boost from domestic and international sugar programs.

The world sugar crop for 1978/79 (September-August) is estimated by USDA at 90.2 million metric tons, raw value, down 2 percent from the record 1977/78 crop of 92.1 million tons. World consumption for 1978/79 is expected to be about 89 million tons, an alltime high. The increase in consumption reflects not only population growth but also rising per capita consumption in some developing countries.

This report was delivered by Mr. Hurt, agricultural economist with Horticultural & Tropical Products Division, FAS, at the annual USDA's Food and Agricultural Outlook Conference in mid-November.

Beginning 1978/79 stocks amounted to about 29 million tons, representing about one-third of the year's requirements. World trade in calendar 1979 will likely show little change from that of 1978. Imports into the United States will increase, but European Community (EC) exports will decline.

Several leading producers—some by design—will have smaller crops in 1978/79. Brazil has set a lower goal, and sugar production will decline about 1 million tons. Approximately one-fourth of Brazil's sugarcane crop will be converted into gasahol as the result of rapid strides being taken to lessen imports of automotive fuel. Australia has reduced its production by 10 percent and will have a crop of about 3 million tons.

The Philippines had a reduction in area coupled with heavy rains and Typhoon Rita, which hit some of the main producing areas in late October. Crops in Argentina, the EC, and India will be smaller. Other large producers that will likely have about the same production in 1978/79 as in the previous year include the USSR, Poland, Cuba, and South Africa.

Elsewhere, a proposal to build more sugar mills in Costa Rica has been restudied and reportedly abandoned for economic reasons. Also, plans to produce alcohol in the Tempisque mill for mixing with gasoline for automobiles apparently have been postponed indefinitely.

Area devoted to sugarcane in the Dominican Republic is unchanged from last year's as sugar prices have made planting very unattractive. The country also has begun to reorganize its sugar industry and is attempting to improve overall efficiency. The Dominican Republic and Venezuela have signed a new agreement in which the Dominicans will supply 208,655 tons in 1979 at a reported price of 10.82 cents per pound (c.i.f.). This is the third year in a row in which both Governments have signed an agreement on sugar.

Sugarcane area in El Salvador is expected to drop in 1978/79 to 39,500 hectares from 41,300 hectares a year earlier.

Sugar production outlook for Mexico points to an increase over the record 1977/78 crop. Mexico's sugar outturn is estimated at 3.2 million tons, owing largely to an increase in sugarcane area of about 8 percent. Mexico is expected to meet its export quota under the International Sugar Agreement (ISA). Five new mills, to be constructed in the southeast of the country, would increase milling capacity by 500,000 tons. Three of the mills are already under construction. Additional mill capacity is needed to keep pace with rapidly increasing domestic consumption.

A big jump in production will come in Panama where harvested area will be up, and two Government mills that operated at 50 percent capacity in 1977/78 will be operating at full capacity in 1978/79. However, the production increase will pose difficulties.

Argentina will have a 2 percent reduction in planted area for 1978/79. The Government has set a sugar production quota of 1,379,000 tons, to conform to ISA quotas. It is expected that 40,000 or 50,000 hectares will not be harvested. Brazil has authorized production of 7.2 million tons for 1978/79. This represents a reduction of practically 1 million tons from 1977/78, and will result in a good supply/demand balance.

Chile will need to import about 290,000 tons in 1979 if stocks are maintained because consumption is increasing while production continues to decline. Export-import activity has been on the rise, with 35,500 tons of refined sugar exported in 1977. Possibly as much as 60,000 tons will be exported in 1978.

Colombia continues to encourage production to supply growing consumption needs and to export. Ecuador is having labor and price problems and the two new sugar mills called for under the Andean Pact are not likely to be carried out in the near future. Effects of drought will be felt again in Peru as its outturn will drop another 50,000 tons in 1979.

The EC is now the world's leading producer of sugar. But it is also a substantial importer and one of the largest exporters. EC production for 1978/79 will be down from the bumper crop of the previous year as Denmark, France, and West Germany expect less outturn. Nevertheless, exports may approach the 3-

million-ton mark and 1.4 million tons will be imported under the Lomé Agreement.

The EC has budgeted 700 million units of account (over US$1 billion) for 1978/79 export refunds on sugar. Only about 180 million units of account are generated by the production levy set on the B quota.

In Eastern Europe, no country will have a significant increase in 1978/79. Declines in production are expected for the German Democratic Republic, and for Poland, where yields were down because of persistent rains and low temperatures during most of the summer. There were also considerable weed infestation and disease. New processing plants are being added at a rapid rate in Yugoslavia (five in 1978), but beet area has not correspondingly increased.

The USSR experienced heavy rains in much of the sugar beet area during harvesttime. This deterred harvesting, resulted in an excess amount of mud on harvested beets, and disrupted and delayed transporting and processing. Weather improved considerably after October 9 and efforts were intensified to reach production goals.

There may be slight declines in production in Mauritius and South Africa in the coming year. Substantial increases are expected for Egypt and Kenya as well as a recovery for Morocco from the low 1977/78 output.

The outturn in India is likely to be lower than the record 1977/78 production, which surpassed the country's annual plan. The Government has repeatedly appealed to farmers to reduce area, but this has not been done. India decided to decontrol sugar, effective August 16, 1978, thereby eliminating all controls on prices, movement, and dual pricing. The Indian Government has moved slowly on sugar exports to avoid huge losses, but has decided to export the entire quota of 650,000 tons allotted under the ISA for calendar 1978. There may be difficulty in this, however, due to dock strikes. No new sugar plants are anticipated at present, although there has been some attempt to put up small sugar plants.

Indonesian sugar production in 1978 dropped 10 percent below earlier expectations owing to heavy rainfall, and import requirements are likely to rise almost 300,000 tons. Thailand is expected to have a significant increase following the drought-reduced 1977/78 production. Japan's production is estimated at about 700,000 tons, and domestic consumption needs will likely be near the same level as in 1977/78. The increased production will result in import requirements being down 50,000 to 150,000 tons.

A 10 percent reduction in production is expected for the Philippines as area declined and some of the producing areas were hit by heavy rains and Typhoon Rita just at the beginning of harvest in late October.

Australia has reduced its production goal for 1978/79 to equate production with domestic needs and the export quota under ISA.

The International Sugar Agreement of 1977 began operating provisionally on January 1, 1978. It is too soon to make an assessment of its effectiveness although prices would probably have gone lower without it. The deadline for ratification has been extended until December 31, 1978.

Adherence by members to export quotas, stocking of sugar by exporting nations, and limiting imports from nonmembers will enhance the possibilities of the Agreement strengthening prices. At the end of November, a further rise of about 3 cents per pound was needed to reach the minimum of 11 cents (f.o.b. Caribbean port) called for in the Agreement.

When the Agreement came into effect, the export quotas were set at 85 percent of the basic export tonnages. Because the prevailing price was below the 11 cents per pound minimum, quotas were reduced on April 24 to 82.5 percent. Allocations from the hardship reserve have been made to El Salvador, Fiji, Guyana, Panama, and Swaziland. Shortfalls, which are not redistributed when the price is below 12 cents, have been declared for Guatemala, Jamaica, Mozambique, and Trinidad. The current quota is 12,524,999 tons, whereas the basic export tonnage is 15,275,000 tons.

The effectiveness of the Agreement undoubtedly would be enhanced if it became fully operational. While there are some 38 member exporting countries and 17 importing members, not all of these have fully ratified the Agreement. The United States, the world's leading importer and one of the top producers, has signed the pact but not ratified it. As the Agreement is still on a provisional basis, contributions to the Stock Fund have been delayed until January 1, 1979. Loans from the Fund to reserve up to 2.5 million tons of sugar over a 3-year period would be a plus for the sugar market.

(The International Sugar Council, meeting in London on November 17, set the initial global quota for 1979 under the Agreement at 82.5 percent of the basic export tonnages. Based on the current membership, the 1979 global quota will approximate 12.6 million tons.)

In addition to the November meeting in London, another meeting of the International Sugar Council was scheduled for December when discussions were to take place concerning the Stock Fund financing scheme, and the possible use of sugarcane for the production of gasahol.

The world price reached its 1978 low on July 26 at 6.03 cents per pound, and by October the price had risen more than 50 percent to 9.30 cents—the high for the year. World sugar futures last July were at their lowest level since 1972. The March 1979 contract rallied from a low of 6.55 cents per pound to almost 10 cents by late October. There were probably several factors contributing to this reversal. An increase in world trade could be expected, as the first 6 months of 1978 were particularly light. Part of the price advance was probably a technical adjustment.

But prospects for a closer balance between production and consumption in 1978/79 and an increasing likelihood that the International Sugar Agreement would become fully operational strengthened prices. Moreover, reports of needed imports by the USSR and the People's Republic of China spurred prices in recent months. Although the rapid price acceleration is probably over, future gains are likely as domestic and international programs are implemented. Limiting the increases, however, are large carryover stocks and the ever-present threat of growing competition from

high fructose syrup.

Presently this threat is mainly in the United States as plant capacity in other countries is very limited. Less than one-half million tons is produced in all of Europe, with most production occurring in Belgium, West Germany, the Netherlands, Spain, and the United Kingdom. Ireland, Italy, France, and the Netherlands plan to build plants totaling about 650,000 tons of capacity, while a 100,000-ton-capacity plant is being built at Tilbury, England, at a cost of $50 million.

Production capacity for high fructose corn syrup in the United States may total 2.5 million tons by 1985, while the rest of the world combined will probably have a capacity considerably less than that. The Food and Agriculture Organization estimates that high fructose corn syrup consumption in the United States, Canada, the EC, and Japan will be 2.5 million tons in 1980 and 3.4 million tons in 1985.

Consideration is being given in some countries to converting sugarcane into alcohol for automotive fuel. Brazil has been the leader in manufacturing gasahol. The supply/distribution system for the 1978/79 season in Brazil has set the quota for transformation into alcohol at the equivalent of 35 million bags of sugar out of a total quota of 155 million bags. This would be equivalent to about 2.1 million tons of sugar, exceeding prospective exports of 1.92 million tons. The resultant alcohol output would amount to 2.2-2.4 billion liters.

Some 150 projects to build new or to expand existing distilleries in Brazil will get Government and private financing. Most of these will use sugarcane as their source of production. Several other countries have expressed an interest in manufacturing gasahol from raw materials, such as sugarcane and/or manioc.

Estimated world net sugar import requirements for 1979 will approach the 21-million-ton mark, with net imports from the free market probably at about 16 million tons. Sugar purchases by the USSR from Cuba are likely to be more than 3 million tons. Imports and production are increasing in the developing countries, and total consumption, as well as per capita use, is on the rise. On a global basis, however, per capita consumption has hovered around 20 kilograms during the 1970's and total sugar usage has increased mainly because of population change. □

Above: Sugarcane field in Queensland, Australia's major sugar-producing State. Below: In India, sugarcane growing near crushing factory.

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World Feedgrain Outlook

to rise during 1978/79 by around 23 million tons. By the end of the season, stocks could be at a level equivalent to about 15 percent of utilization. The stocks-to-utilization ratio hit a low in 1975/76, and although it has increased since, it is still well below the early 1960's, when in most years global stocks were the equivalent of at least 20 percent of utilization. Stocks outside the United States could grow to a record, but as a percentage of foreign utilization would be only around 9 percent.

Outlook for balance of 1978/79. Some of the more important developments that will have impacts on the world feedgrain outlook and U.S. exports over the balance of this season are:

- Further purchases of corn by the PRC;
- The ultimate level of purchases by the Soviet Union;
- The outcome of the Southern Hemisphere corn and grain sorghum harvests;
- EC subsidized export selling of barley;
- The aggressiveness of Canadian and Australian barley export sales;
- Shifting by either the USSR or Eastern Europe from corn to barley imports;
- Japan's decision on the disposal of surplus rice;
- Program announcements in the United States and indications of farmers' participation; and
- Early indications of the next season's supply and demand outlook, such as planting intentions or conditions and winter crop progress in Northern Hemisphere areas such as the USSR and Western Europe.

Implications for U.S. exports. U.S. feedgrain exports have started off the 1978/79 season strong. Exports of corn during July-October were approximately 40 percent ahead of those in the same period a year earlier. Outstanding sales as of early November were about equal to those on the same date last year. The large sales to the PRC and Brazil are major factors in this strong start.

For the season as a whole, the atmosphere confronting U.S. feedgrain exports appears to be one of strong and increasing world import demand, but potentially more competition from other exporters than in recent years, including more competition for U.S. corn from other countries' barley. Nonetheless, U.S. feedgrain exports are currently projected to rise slightly during the July-June world marketing year and be the second largest volume on a crop year basis. □

Continued from page 4

Title II Proposals

handling, storage, and protection of cargo; congestion due to overload of facilities; and labor availability.

Comments must be received on or before January 2, 1979, to be considered. All written comments should be addressed to: Assistant Deputy Administrator, Commodity Operations, ASCS, USDA, Room 212W Administration Building, P.O. Box 2415, Washington, D.C. 20013. Written submissions will be available for inspection from 8:15 a.m. to 4:45 p.m., Monday through Friday in Room 5754 South Building, 14th and Independence Avenue, S.W., Washington, D.C. □

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